Data Sets on UN Millennium Development Goals (MDG) and WHO Core Health Indicators
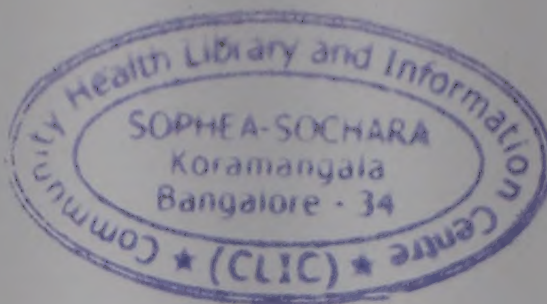
Report of a Regional Consultation
WHO-SEARO, New Delhi, 17-19 June 2003

World Health Organization
Regional Office for South-East Asia
New Delhi
2003

Data Sets on UN Millennium Development Goals (MDG) and WHO Core Health Indicators

Report of a Regional Consultation
WHO-SEARO, New Delhi, 17-19 June 2003

WHO Project No: ICP OSD 001

World Health Organization
Regional Office for South-East Asia
New Delhi
November 2003

Contents

Annexes

1. BACKGROUND

The "UN Millennium Declaration" was adopted by 189 states at the UN Millennium Summit in New York in 2000. In 2001 the UN Secretary-General submitted, a "Road map towards the implementation of the UN Millennium Declaration" that set out the specific goals, targets and indicators (UNGA A56/326)[1] to the 56th UN General Assembly. The development goals, appearing in Section III of the Report, are now referred to as the "Millennium Development Goals" (MDG). The MDG do not undercut in any way the agreements on other goals and targets reached at the global conferences in the 1990s and 2000s. The MDG and their targets and indicators are still limited in number, stable over time and simple enough to be understood by lay people. There are eight goals, eighteen targets and forty-eight indicators originally set in July 2002. Six out of the eight goals, nine out of the eighteen targets and eighteen out of the forty eight indicators are related to health and health-related areas. Thus, it underpins health improvement and places health at the centre of development and eradication of poverty. The UN has established four activities to support achievement of UN MDG, namely, (i) _the Millennium reports_, involving establishment of reporting mechanisms at country and global levels to monitor progress towards achievement of the goals; (ii) _the Millennium campaign_, aiming to raise public awareness of, and commitment to, the development goals; (iii) _the Millennium Project_ that promotes research and analysis on the strategy and resources required for achieving the MDG, and (iv) _Operational Support_ at country level provided by UN agencies (and their country teams) for preparation of country level reports.

The MDG are of increasing strategic importance for WHO, as the majority of the goals, targets and indicators are related to health. They have been used to focus and reorient the work of WHO collaborative programmes and as a benchmark against which to assess health development impact and organizational performance. The commitment of WHO to the UN Millennium Declaration was reaffirmed in resolution WHA55.19. The work of WHO on

---

[1] Report of the Secretary-General to the 56th UNGA, on implementation of the UN Millennium Declaration (Document A/56/326)

MDG will not only contribute to the collective efforts of the UN, but also form an integral part of its co-activities [2].

In order to support countries effectively in achieving MDG, WHO adopts a process that involves working closely with the Member Countries and developing a consensus in the reporting progress, while continuing to provide normative and technical support to the countries. WHO SEARO in collaboration with WHO Headquarters (EIP Cluster) organized a "Regional Consultation on Reporting on Data Sets on UN MDG and WHO Core Health Indicators" in SEARO, New Delhi, from 17-19 June 2003, with the following objectives.

2. OBJECTIVES

The overall objective is to bring together all levels of the Organization to discuss how best to meet WHO's responsibilities in general regarding reporting of the 17 MDG health indicators, and to discuss in particular, the immediate process to be followed, leading up to their publication in the annexes of World Health Reports and other WHO publications.

Specific objectives are:

(1) To review the availability and technical accountability of the data sets on the UN MDG and WHO Core Health Indicators, reported by the Member Countries and those produced by WHO, and

(2) To develop a work plan for continuing dialogues and consultations for improving availability and technical accountability of data sets.

The expected outcomes of the meeting are:

➢ Understanding, agreement and comments on indicators and data templates in relation to: (a) definition: (b) technical terms; (c) use of proxy or sub-indicators; and (d) estimation and validation methods for cross country comparison;

➢ Suggested list of data sources for each indicator, whether to use (a) national data; (b) UN Agencies or any other Agencies (having

---

mandated for relevant indicators); and/or (c) Relevant assigned agency after consultation with countries;

➤ Process and mechanism at country level for data collection, collating and reporting on UN MDG and WHO Core health data sets, and

➤ Work Plan for country consultation processes.

3.   INAUGURAL SESSION

Dr Poonam Khetrapal Singh, Acting Regional Director, and the Director, Programme Management and Deputy Regional Director, WHO/SEARO, inaugurated the meeting on behalf of Dr Uton Muchtar Rafei, the Regional Director. In her opening remarks, the Deputy Regional Director said that the meeting marked an important milestone in the efforts to ensure strong evidence-based information through multisectoral collaboration towards achieving the MDG. She was pleased to note that, with the full support of EIP cluster of WHO Headquarters, it had been possible to bring together all experts representing national health ministries and central statistical organizations to this meeting. She referred to the Secretary-General's road map as part of his report to the 56th UN General Assembly, in which he spelt out the Millennium Development Goals (MDG) and their related targets and indicators.

She said that six out of the eight goals, nine out of the 18 targets and 18 out of the 48 indicators were related to health and health-related areas. The interventions with regards to all these indicators were truly related health actions such as those for reducing 'maternal mortality' or 'malaria and tuberculosis prevalence and deaths'. Some of them are actions for improving health such as 'access to improved water supply', 'dietary energy consumption' or 'use of solid fuels'. She reiterated that this, once again, highlighted the fact that improvement in health was vital for future development and eradication of poverty.

Dr Poonam Khetrapal Singh also pointed out that the Director-General, Dr LEE Jong-wook, in his address to the fifty-sixth World Health Assembly, emphasized the importance of commitment to achieving results at the country level. She said that there was a need to aggressively pursue these outcomes to come up with measurable health objectives, including the MDG, which

provided a framework for monitoring progress of development. The MDG are the strategic markers within a broad health agenda that builds on the Alma Ata legacy. She recalled that since early 2000, the Regional Office had been taking the initiative to collect data sets on core health indicators from each country and published them in regional bulletins and brochures. This mechanism was used to improve the collection, collation and reporting as well as updating of these core health data sets. At the same time, she asserted that in the spirit of one WHO, the annex tables contained in the annually published World Health Reports would be updated with the inclusion of MDG reporting.

The Deputy Regional Director stressed that all UN Member Countries were required to collectively report progress towards achieving the MDG. Thus, she added that the national health authorities had an additional responsibility for reporting annually the progress on 18 of the health related MDG indicators. She was glad that some countries in the Region had already initiated the multisectoral process of data collection and reporting on the progress on MDG, while some were in the process of developing such reports. She said that during the process of data collection and reporting, some challenges such as data definition, data sources, estimation processes and methodologies, agreement of final data etc, had been found that needed to be addressed at this meeting. She said that it was most appropriate and timely that all parties concerned had come together to foster a common understanding, which should help improve the collection and reporting on MDG indicators. It was felt that the deliberations would resolve on how best to meet the responsibility of WHO with regard to reporting the 18 MDG health indicators, and in particular, the immediate process to be followed, leading to their publication in the annexes of World Health Report 2003, due for release in October. She urged the meeting to review the availability and technical accountability of the data sets on the MDG and WHO Core Health Indicators, reported by the Member Countries and those produced by WHO. With the rich background and expertise in this area of work, the objectives of this consultation work be fully met. She looked forward to receiving the widest possible range of views and ideas on reporting on data sets on MDG and WHO core health indicators and the country consultation process to be adopted for this purpose.

Dr Abdelhay Mechbal, Director, HFS/EIP, WHO-HQ, in his opening remarks said that the SEARO consultation on MDG was the first of a series of consultations planned by HQ for all Regions. He said that health MDGs have

been an important agenda on the international forums. This was a major challenge not only to WHO, but also to all agencies, and it aimed to strengthen monitoring and coordination at all levels. He then enumerated the lacunae of the MDGs especially those targets and indicators related to NCD and reproductive health. He reaffirmed that most indicators captured major issues in communicable diseases. There were challenges on data collection, compilation, analysis, including methodologies. One such example in data collection and analysis was how to get reliable data on prevalence and deaths due to malaria, TB and HIV/AIDS. He believed that the adoption of the MDGs as part of national health goals and the monitoring of the progress of MDGs constitutes an opportunity to strengthen national health information systems.

Dr Abdelhay Mechbal also referred to a new initiative called "Health Metrics Network" that would aim to harmonize and improve methods of measurement and estimations so as to decrease the burden of data collection to a minimum of globally agreed upon data sets (the core health indicators) -. This initiative, which is in its preparatory phase, is supported by the senior management level at WHO.. It consists of seven working groups looking at various issues: (1) country health information systems (HIS), (2) monitoring and evaluation of HIV/AIDS, tuberculosis and malaria, (3) health inequalities, (4) vital registration, (5) surveys, (6) surveillance, and (7) statistical modeling and other estimates. Each MDG indicator would be assessed in respect of the sources of data and methods of estimation. He stated that WHR 2003 would have an annex incorporating some of the data for MDG targets and indicators.

Dr U Than Sein, Director, EIP/SEARO explained the Programme of Work (Annex 1) and introduced the participants (Annex 2). Dr B D Chataut of Nepal was nominated as the Chairperson, Dr Daw Tin Linn Myint of Myanmar as Vice-Chairperson, and Dr Sunil Senanayake of Sri Lanka as Rapporteur.

4.   PROCEEDINGS

4.1   Presentations

Dr Dominique Egger, Coordinator, HFS/SPM provided a brief history of how MDG came into being. She highlighted that health figured prominently in the MDG, as six out of eight goals, nine out of eighteen targets and eighteen out of 48 indicators pertained in part or in full to health areas. While some of the indicators were broad, a few were specific, especially those related to reducing

disease prevalence and deaths. The Member States of UN agreed that WHO as an international health agency should be responsible for monitoring and reporting of 17/18 health indicators, some of which had to be undertaken jointly with other UN agencies like UNICEF, UNAIDS and FAO (exclusively for MDG indicator 5). She briefed some examples of the existing situation for some selected indicators, such as under-five mortality rates, skilled birth attendants, water supply and sanitation and diseases prevalence. It was noted that some indicators were achievable, based on the decade experiences, some could not be achievable until and unless concerted efforts were made both in improving the health systems with additional resources, but also long educative actions, in other sectors with the view to contributing to health development. All these required strong stewardship. The main aim of the consultative meeting was to find ways and means to improve the national health information system, in order to monitor the progress of health development, using MDG as a framework. At the same time, the review of the existing work by the organization and Member Countries relating to MDG monitoring would provide opportunities for improving the availability and technical accountability of the information.

Dr U Than Sein, Director, EIP/SEARO highlighted the importance of monitoring the UN Development Goals within the context of reviewing the performance of the health system at the national and sub-national levels. Most of the indicators on UN MDG were similar to the development indicators for measuring health system performance including the performance of health development programmes like immunization, tuberculosis and HIV control. He further described the process of compilation and reporting by WHO at various Government Bodies, and also weekly, annual and periodical progress reports published for public utility. He stressed that there was a need to review and update the data sets for WHO core health indicators in line with the UN MDG indicators. He provided examples of the UN MDG data sets for all Member Countries of the Region and also of national reports on MDG. He highlighted some of the technical issues like definitions, measuring instruments, source, as well as issues related to the process of the reporting, accountability and accessibility of information.

Dr Michel Thieren, Scientist, HFS/SPM, WHO/HQ, provided further details of how WHO would perform its monitoring responsibility, based on the guidelines provided by the Executive Board and World Health Assembly. He reaffirmed that WHO collaborative activities would improve national health

information systems and build capacities to generate information and use it for assessing national policies towards achieving the MDG. He proposed what was required for implementation to improve the global support for collation and dissemination of reliable health information. He further stressed the need for interagency coordination at all levels, especially with UNICEF for nine MDG health related indicators and UNAIDS for HIV-related MDG indicators. The UN Country Team also played a crucial role in coordinating national data sets for MDG. He informed the participants that the data on MDG indicators, as appears in UNSD Website[3], are generated by each respective responsible UN agency and transmitted to UN-DESA that acts as central repository for the MDG country database. Reports of each agency that publish MDG country data is referring to the UN-DESA database as the main source. In this respect, duplication and conflicting information across UN agency reports would be minimized. An inter-agency working group on MDG indicators in which WHO was represented met twice a year within the United Nations Development Group (UNDG). There is a need to further strengthen inter-agency coordinating mechanisms to harmonize data collection and measurement methodologies.

Dr Kunzang Dorji, National consultant of Bhutan, reported briefly on the status of MDG monitoring. He said that Bhutan had recently published a country report, released by the Prime Minister at the round-table in Geneva. Dr Dorji highlighted a few indicators which were achievable by Bhutan, and also solicited technical, financial support for some areas such as expanding skilled birth attendants, and control of HIV/AIDS, tuberculosis and malaria. He conceded that there was a need to further integrate MDG within the national context and also advocate the strategic direction for achieving such goals.

Dr Bambang Hartono, Chief, Centre for Health and Data Information, Ministry of Health, Indonesia provided briefly a progress report on health against the goals and targets of MDG. He highlighted the similarity of MDG with the goals and targets of "Healthy Indonesia by 2010". He stressed the difficulties of implementing interventions, especially to further reduce mortality rates, once they reached the lower levels. He stressed the importance of strengthening and revival of the national health information systems, within the context of decentralization. He emphasized the need to strengthen routine health information systems rather than relying on surveys which required

---

[3] UNSD Website for UN MDG at http://milleniumindicators.un.org/unsd

heavy investments and external inputs. He also raised the issues of the integration of routine reporting, as otherwise a situation could arise wherein instead of minimizing, it could become bigger and unmanageable. There was a need for shared responsibility among various agencies, while, at the same time, maintaining technical quality and easy accessibility.

Dr Daw Tin Linn Myint, Deputy Director, Ministry of Health, Myanmar described briefly the progress and achievement of UN MDG in Myanmar, using various sources of information. Based on the trends of health development achievements in the last decades, Myanmar might be able to achieve the MDG as envisaged. She highlighted a few areas, where concerted efforts were required, especially in reducing infant and maternal mortality, control of HIV/AIDS, malaria and tuberculosis. She also stressed the importance of improving the national health information systems and integrating the monitoring of MDG within the framework of monitoring overall health development.

Mr Muniswar Mool, Senior Public Health Administrator, Ministry of Health, Nepal reported that there was a national consensus in his country for monitoring the MDG as a joint exercise of UN and government agencies. A national report was published in June 2002, based on the information available from routine information, national surveys and other sources. It was observed that there was a need for clear definitions, availability of appropriate measuring tools and agreement or consensus on the national representative data.

Dr P Mertens, CCO/SDE, WHO/HQ gave an overview of the MDG enumerating the eight goals, 18 targets and 48 indicators. He said that 30 to 40% of the indicators were related to health and accountable by WHO. He highlighted that the focus of MDG framework at country level at the moment was on MDG Reporting. The UN Country Team (UNCT) led by the Resident Coordinator supported the preparation of the MDG Reports (MDGR).[4] MDGR primarily aimed to integrate the global MDG targets and indicators with national development priorities, including a set of indicators to monitor progress in this respect. The World Bank, OECD/DAC, and UN system agencies had already invested resources in this process. The MDG reports would form the basis for country level monitoring and would complement the

---

[4] The UNDG Guidance Note on MDG reports, October 2001, available on web site of http://www.dgo.org

United Nations Secretary General's (UNSG) global report on the implementation of the Millennium Declaration. This UNSG report would provide summary statistics for all the MDG, aggregated at the global and regional levels.[5] The UNCT also had a role related to the national millennium campaigns supported by the Global Millennium Campaign Unit. The UNCT was expected to play a role in five main areas: (i) supporting the monitoring and analysis of priorities among partners in development; (ii) drawing attention to the MDG through dialogue with a wide range of national partners; (iii) making available the resources: technical, financial, or organizational, to foster strong partnerships; (iv) providing access to international experience and expertise through the Millennium Campaign Unit; and (v) reorienting the UN system's communication and advocacy efforts around the MDG toward a collective approach.

The participants, while commending the linkages of MDG and national health development goals, further stressed the need for promoting more advocacy at the country level on the understanding and further adoption of the MDG and their related targets and indicators. It was noted that the health sector played a major role in achieving MDG, while other sectors did need to be involved. Since all countries in the Region were in the category of developing world and most of them being the least-developed, additional resources would have to be generated in order to achieve MDG, especially in reduction of child and maternal mortality and control of major diseases.

The importance of integrating national health information systems was stressed as part of national health sector reforms. Concern was expressed that various agencies within the countries were producing different data sets, using different definitions and parameters, varieties of methods, tools, and instruments for collection, compilation and analysis. WHO should work closely with the Member Countries and other development partners in improving the availability and technical accountability of the information on the indicators that WHO is responsible for on reporting MDG related to health.

---

[5] See details in UNGA Doc A/57/270, a report submitted to the 57th UNGA by the Secretary-General. The main premise of the UNSG report is to: move the millennium commitments from the global to the local level; create the necessary links between global target setting and national priority setting; re-energize a broad political constituency to accelerate progress towards the goals; generate public awareness, scholarship and debate for action around the development challenges of our times; and build alliances across and within countries, working with national governments, civil society, the private sector, international financial institutions and other development partners (See also UN-DPI Fact Sheet on MDG, October 2002).

Dr Michel Thieren, EIP/HQ, further elaborated on the scope, definitions and measurement methods of MDG and related targets and indicators. Each of the definitions was taken up for discussion. The participants expressed the limitation of the definitions of the indicators, namely the absence of indicators for non-communicable diseases like chronic diseases/conditions, behaviour-related risk factors, mental health, occupational health, and health systems. Low relevance of certain indicators to some countries where diseases were almost contained (like malaria, TB and HIV) was also cited. Other concerns voiced were flexibility in incorporating new key international commitments and WHO Strategy on Core Health Indicators. It was felt that some of the definitions could be adopted to match the situations at the country level. A number of the MDG health-related indicators, as formulated within the official UN documents were difficult to measure as they stood[6]. The main reasons for these difficulties were that:

> Some MDG health indicators included more than one entity to be measured;

> Some MDG health indicators were not disaggregated for the population groups most affected by or vulnerable to the targeted disease, or most in need of a specific health intervention, and

> Other MDG health indicators had a numerator and/or a denominator which needed to be better defined.

Examples of indicators which included more than one entity to be measured, were:

> Indicator no. 21, *Prevalence and death rates associated with malaria*, contains two rates to be measured, one concerning prevalence and the other death. For this indicator two different measures are therefore required: a measure for prevalence and another measure for mortality. The under-five mortality rate is actually taken as a recommended proxy for assessing the impact on malaria-specific mortality among children under five. The under-five mortality rate is monitored in combination with the coverage of the three interventions of the Roll Back Malaria initiative.
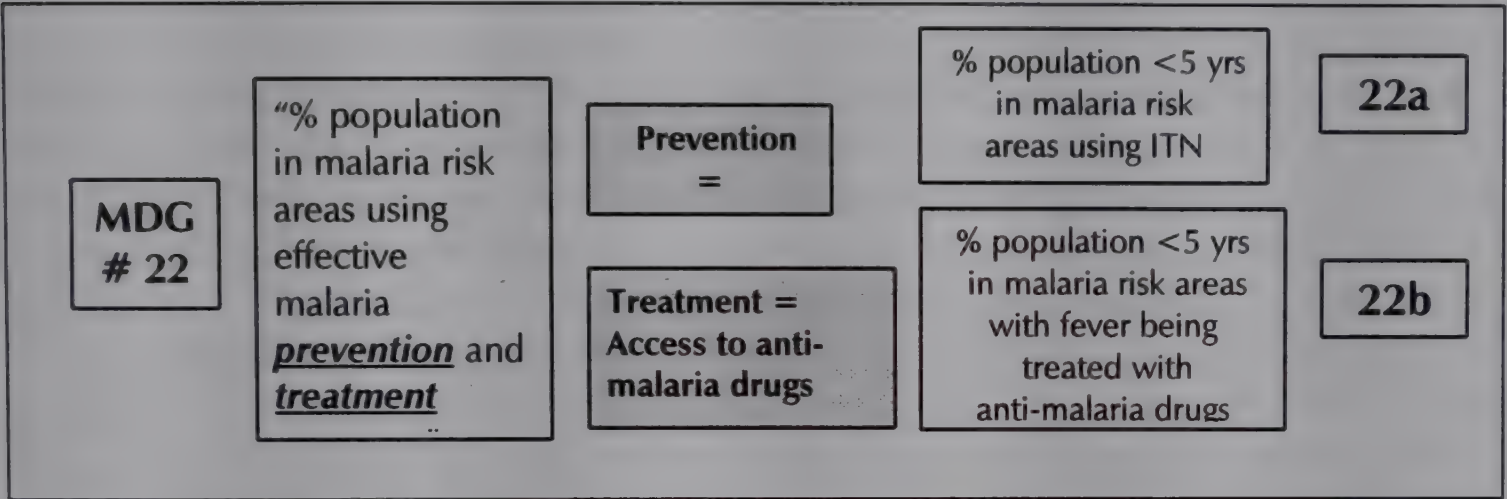
---

[6] **Note:** Examples are taken verbatim from the "Millennium Development Goals: the health indicators, scope, definitions and measurement methods", WHO Geneva (Document WHO/EIP/HFS/03.2)

> ➢ Indicator no. 22, *Proportion of population in malaria risk areas using effective malaria prevention and treatment measures,* contains two entities to be measured: malaria prevention and malaria treatment. For this indicator two different measures are therefore required: a measure for prevention and another for treatment of malaria.

Figure 1: *Need for proper definition (example: Malaria)*

NUMERATOR: which prevention/ treatment measures?
DENOMINATOR: which target population groups?

> ➢ Indicator no. 23, Prevalence and death rates associated with tuberculosis, contains two rates to be measured: prevalence and death. For this indicator two different measures are therefore required: a prevalence measure and another measure for mortality.

> ➢ Indicator no. 24, *Proportion of tuberculosis cases detected and cured under Directly Observed Treatment, Short-course (DOTS),* contains two entities to be measured: a measure for detection and another for the success of the treatment.

Examples of indicators which are not sufficiently disaggregated or do not take into account the most affected population groups

> ➢ Indicator no. 18, *HIV prevalence among pregnant women aged 15 to 24 years:* Countries with concentrated or low-level epidemics (the majority in the world) do not have reliable data on 15–24 year-old pregnant women, but usually have information on the prevalence of HIV/AIDS in high-risk population groups, such as "injecting drug

users", "female sex workers", or "men who have sex with men". The relevance of this indicator depends therefore on each country's context.

> Indicator no. 30, *Percent of population with sustainable access to an improved water source, urban and rural,* contains two types of population zones, which consequently require that the information be disaggregated into two different figures.

Examples of indicators which have a problem with their numerator and/or denominator

> Indicator no. 19, *Condom use rate of the contraceptive prevalence rate,* has neither a well-defined numerator nor denominator. Following the adoption of the Declaration of Commitment on HIV/AIDS at the United Nations General Assembly Special Session on HIV/AIDS in 2001 (UNGASS) a framework for HIV/AIDS monitoring was developed. Most indicators are now being re-formulated in order to match the UNGASS HIV/AIDS reporting standards. "Condom use in 15–24 year-old groups at last high-risk intercourse" broken down by sex conforms with UNGASS. "Misconceptions about HIV/AIDS among people aged 15–24 by sex" is also recommended for completing condom use indicators, both being more appropriate than the contraceptive-related MDG indicators which are too narrow in focus.

> Indicator no. 20, *Number of children orphaned by HIV/AIDS:* UNGASS recommends measuring this indicator by looking at the ratio of orphaned and non-orphaned school children between 10 and 14 years of age.

> Indicator no. 22, *Proportion of population in malaria risk areas using effective malaria prevention and treatment measures:* As mentioned above there is a need to define the numerator of "malaria preventive and treatment measures". WHO has proposed that "access to insecticide-treated nets (ITNs) for under-five children" and "access to anti-malarial drugs for under-five children", be used respectively, as the definition of the numerators for the malaria

output MDG indicator. This refers to the core indicators used to monitor progress of the Roll Back Malaria Initiative.

There are also some health indicators which are important enough to assess the progress but again extremely difficult to measure, for various reasons. Here are some more examples.

Maternal mortality: Measuring *maternal mortality* accurately is difficult in most countries, as it become rare events. It could be near accurate if comprehensive registration of deaths and of causes of death exists. Currently maternal deaths account for around one quarter of all births. Most other countries used periodic and ad-hoc survey methods or estimation models to come up with national estimates. As these are subject to wide margins of uncertainty, most of them could not be used to monitor trends. One indicator proposed is focusing on the *professional care during pregnancy and childbirth*, particularly management of obstetric care. The most widely used indicator is the "proportion of women who deliver with the assistance of a medically-trained health care provider – doctor, nurse, midwife (generally referred to as *"skilled attendant"*. Concerns have been expressed that the term "skilled attendant" may not adequately capture the extent to which women will have access to good quality care, particularly when obstetric complications arise. Although efforts have been made to standardize the definition of "skilled birth attendants" that included doctors, nurses, nurse-midwives, midwives and auxiliary midwives as it was used in most household surveys, it is probable that many skilled attendants would not meet the criteria as defined by WHO.[7]

Malaria: Estimates of *malaria* cases are highly variable, and range up to 500 million worldwide. At a minimum, 1 million people die from malaria every year and malaria is likely to be a contributing factor in another 2 millions deaths. About 80% of malaria deaths are among young children living in sub-Saharan Africa.[8] Roll Back Malaria (RBM) initiative, established in late 1998 by WHO/UNICEF and the World Bank, identified four main interventions to reduce the burden of malaria: (1) use of insecticide-treated nets (ITNs), which have been demonstrated to cut all-cause child mortality over the first two years

---

[7] Details on measuring Maternal mortality estimates can be seen in document "Maternal Mortality in 2000: Estimates developed by WHO/UNICEF and UNFPA" Website: http://www.who.int/reproductive-health/MNBH/maternal_mortality_2000/index.html

[8] Malaria mortality estimates are based on limited data and do not account for co-morbidity of various types. Work is under way to address these issues and the estimates will be revised retrospectively once the epidemiologic review is completed and the procedures to account for co-morbidity have been developed and agreed upon.

by 20%; (2) prompt access to effective treatments in or near the home; (3) providing anti-malarial drugs to symptom-free pregnant women in high transmission areas, and (4) improved forecasting, prevention and response, essential to respond quickly and effectively to malaria epidemics. The present MDG targets and indicators related to malaria include more than one entity to be measured as indicated earlier.

Tuberculosis (TB): TB kills 1.7 million people every year. In addition, almost half a million people infected with HIV are also contracting TB. Each year there are about 8 million new TB cases and poor people are most at risk. Most deaths associated with TB occurred during the most productive years – between 15 and 54 years of age. Detecting and curing TB is, therefore, a key intervention for addressing poverty and inequality. The recommended approach is the "directly observed treatment, short course", called DOTS, an inexpensive strategy that could prevent millions of TB cases and deaths over the coming decade. The MDG has called for "reduction of TB prevalence and deaths by 50% by 2015". The indicator also requested for more than one entity to be measured. In addition, there are three major methods for measuring TB prevalence: (1) Notification (reporting) of TB cases and deaths; (2) Tuberculin surveys among school children to determine the annual risk of infection (ARI), and extrapolating the results to obtain TB disease prevalence, using Styblo ratio, and (3) Community TB prevalence surveys, carried out through household surveys, in identifying the sputum-smear positive TB cases in the community. Each methodology has its own strengths and weaknesses. The notification or reporting of cases and deaths depended upon the availability and use of health care facilities, as well as the diagnosis and reporting completeness. The second method, the tuberculin surveys were done amongst the children unvaccinated with BCG vaccine or without BCG scars. In addition to the difficulty of finding the target children where BCG coverage is almost 100%, the logistics of tuberculin testing and bias while reading the results could pose additional problems. Similar problems in interpretation of X-rays, logistics of smear examination and culture existed in conducting community TB prevalence surveys. Moreover, surveys are time consuming, labour intensive and expensive, and hence, they have been carried out only at intervals of 5-10 years. In view of these experiences, there is a need to develop a standardized approach to assess and monitor the TB burden in the Region. WHO recently published a "Global TB Burden Report

of 2003"[9], based on wide consultations and reviews, that provide estimated data on TB morbidity and mortality for all Member Countries as of 2003.

Another issue of MDG monitoring and reporting is the validity of sources of information. A variety of sources exist for each MDG health indicator, but they are not all available in each country and for each particular year. For example, mortality data are preferably generated through vital registration systems and national censuses; whereas morbidity data come from routine health reporting and periodic surveys. Since these are often incomplete, additional data sources are necessary from other surveillance systems, and population or facility based surveys. When the evidence is very partially available or simply not existing, there is a need to apply appropriate estimation procedures, based on known relationships between different population and countries. These analogies are confirmed by similar socioeconomic determinants, themselves measured through different surveys as well.

On a general basis, the data collection instruments that are particularly informing on the MDG health indicators are the main groups of internationally performed population health surveys, national censuses, vital registration systems and other surveys as follows:

> **The World Health Survey (WHS):** is conducted by the World Health Organization periodically, to compile comprehensive baseline information on the health of populations, using a modular approach. It contains seven modules, covering health states, risk factors, responsiveness of health systems, and coverage of key health interventions, health care financing and mortality. It could provide information in total or partially on 11 of 18 MDG health indicators. The survey is administered in 70 countries for the first time in 2003.

> **The Demographic and Health Survey (DHS):** is sponsored by USAID and undertaken by MACRO International, covering 12 of 18 MDG indicators including the ones that are not captured by the WHS. It provides information on demography, health and education. It is often used as the most reliable data reference in countries where the national health information systems are deficient. The DHS is implemented in over 70 countries, but not on a regular time-base. In most countries, there is only one DHS available, rarely two or three, and very occasionally four, since it was implemented in 1984.
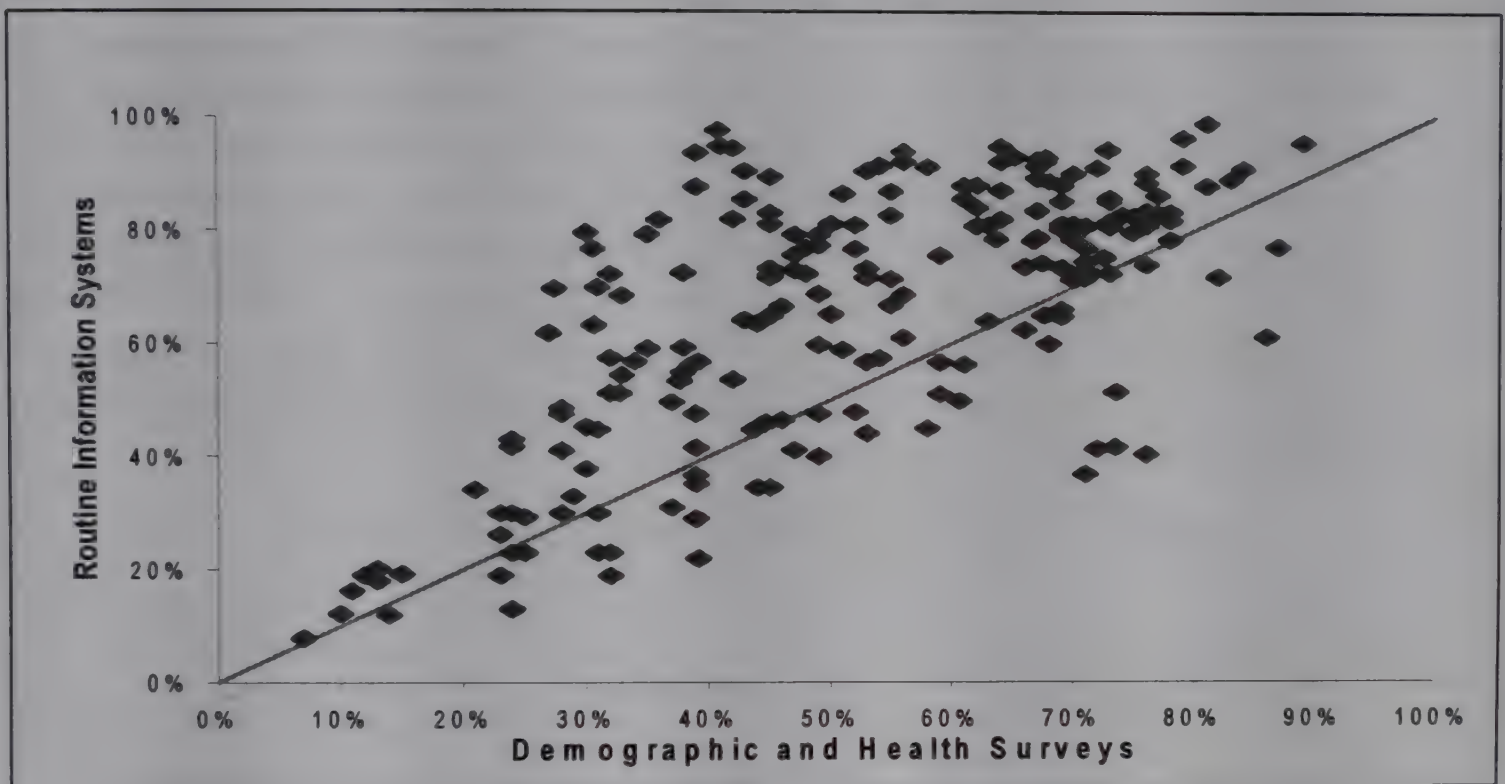
---

[9] WHO Report 2003, Global Tuberculosis Control-surveillance, planning, financing (WHO/CDS/TB/2003.316)

> **The Multiple Indicator Cluster Survey (MICS):** is conducted by UNICEF since 1994 to provide information for reviewing progress towards reaching the Child Summit Goals. It focuses on infant and child mortality and other childhood related health interventions including the use of insecticide-impregnated bed nets. Over 60 countries have used the MICS.

> **The Living Standards Measurement Survey (LSMS):** was first launched by the World Bank in 1985 and has considerably evolved since then. The LSMS provides useful information on the socioeconomic determinants such as household income and assets that are necessary for poverty analysis, as well as information on nutrition, water supply and sanitation.

> **Vital Registration or Vital Statistics Reporting:** is a main reliable source to assess mortality outcomes as they result from direct observation. Some estimation techniques have been applied to adjust for incomplete registration and low specificity. Almost all countries have implemented vital registration systems.

> **Censuses:** National census is unique among surveys, as it covers the entire country and thus, is useful for cross-comparison among the smallest geographical areas or ethnic groups. Due to the high cost involved, it is usually carried out only every ten years, and in some countries, only on a sample of the population. The census covers demographic, socioeconomic and health information. It is the basic source of benchmark demographic data. The UN population estimates, revised every two years, are often different from the national estimates, due to variation in use of different methods and standards.

> **National Household Surveys on socioeconomic and health and other national priority issues:** There are a variety of national household (HH) surveys of variable frequency. They are either general in their purpose (periodic socioeconomic and health survey) or have a limited range of purposes (national immunization coverage survey, national cancer survey, national TB or leprosy prevalence surveys, national goitre survey, etc.).

A recent study done by WHO on the validity of reported immunization for DTP3 in 45 countries, in comparing DTP3 immunization data of routine and surveys, showed that there were significant differences between routinely

reported figures and survey estimates.[10] Evidence can be used for strategic decision-making, programme implementation and management, monitoring of outcomes or achievements, and evaluation of what works and what does not. The requirements for strength of evidence vary for different uses. For the monitoring of critical outcomes like tracking progress and measuring achievements of MDG, the "best available evidence" may not be sufficient, if that "best evidence" carries lots of uncertainty. Only evidence with the narrowest possible uncertainty interval can demonstrate that progress is being made. It also depends on how evidence for MDG indicators is received from and where.

Figure 2: *Adjusted DPT3 coverage rates by birth cohort,*
45 countries, 1985-1998

It first depended on what information was available for a "quantity of interest" (an indicator for a given population at a certain time). Some information could be made available through a synthesis of direct measurements, while some would be derived from direct measurements adjusted for bias or a mix of direct measurements unbiased or adjusted for bias, and evidence available from similar populations, or through observed relationship between measured determinants and variables of interest. It could

---

[10] Murray CJL et al (2003). *Validity of reported vaccination coverage in 45 countries* The Lancet: 362; pp. 1022-27

also be through various projection procedures for time trends depending on the time lag the information is available for.

In some cases, the estimates have to be provided with uncertainty intervals. Therefore, judgement on the appropriate use of a figure given its level of uncertainty should be based on qualitative terms using a "typology of evidence" framework (Figure 3) that can inform the limitation to use a figure for assessing trends and changes. Situation 1 represents the best where the national vital registration system (VRS) provides mortality data on a regular basis using well-defined criteria. In situation 2 & 3, where the existing VRS is less efficient, either because the time of reporting is not accurate, or because it covers only part of the population, or it confounds causes of deaths, the data has to be completed by using other sources. Various statistical models can be used to correct for biases, project in time and compute different sources. In situation 4, which is the worst case, when the available data covers neither the population of interest nor the same time period or in some cases data is not available at all, estimates could then be generated from indirect observations using data from similar population, using statistical methods based on well-established relationships between the populations of interest and the population for which the data is available. Once such extrapolation procedures are applied, there is always the possibility of increasing uncertainty and limitation in the use of final estimates.

Figure 3: *Framework towards a typology of evidence*

The following table identifies eight types of estimates defined in terms of data availability and its timeliness. The strongest estimates are the ones for which directly available measures on the population and the year of interest exist. The weakest estimates are based on known assumptions and observed relationship between socio-economic determinants for the indicator being measured, and on projection forward to the year of interest.

Table 1: **Methods used for validating data based on different time frame**

Methods used for validating Data	Data time frame	
	A. Data available for time period of interest	**B. Data available for earlier time period**
1. Direct - unbiased measurement(s) available for population of interest	Evidence based on synthesis of available measurements	Evidence for earlier time period projected forward using model of time trends
2. Direct - biased measurement(s) available for population of interest	Evidence based on synthesis of measurements adjusted for bias	Evidence for earlier time period (adjusted for bias) projected forward using model of time trends
3. Partial direct data available for population of interest	Partial data corrected for known biases and supplemented by evidence for other similar populations or use of prior knowledge and internal consistency	Partial and other evidence used together with model to project forward to period of interest
4. Direct data not available for population of interest but information on covariates and evidence of their associations is available	Evidence based on observed relationship between measured covariates and quantity of interest	Evidence based on observed relationship between measured covariates and quantity of interest, and projected forward

In summary and conclusion,

➢ There is only one list of MDG indicators, but it is often more than one measure for a given indicator. The list is dynamic and will necessarily evolve in response to changes over time in concepts, definitions and methodologies. It is therefore not intended to be prescriptive, but data interpretation has to be made taking into account the country-specific context and the views of various stakeholders in preparing country level reports.

➢ Many countries in the Region have different types of periodic health and socioeconomic surveys such as WHS, DHS, MICS, VRS, LSMS and national socioeconomic and health surveys that include data for MDG indicators, in addition to routine data from which annual health statistics are being analyzed and produced. Reproduction of MDG related data from these surveys and routine data collection and reporting will not be a major issue. It is now to review the situation of such existing systems against what type of definitions they used, what kind of data could be made available for MDG status reporting and how they should be further improved.

➢ The MDG give a high prominence to health, but do not cover all priority areas of health development. They are mainly a set of outputs and outcomes that need to be associated with inequality measures to allow for a poverty analysis and/or for sub-national analysis. The MDG indicators require information that is not necessarily available in every country, but various estimation methods could fill these information gaps.

➢ WHO is developing a strategy for the development of core-health indicators and assessing inequities. The monitoring and reporting of MDG health indicators provide an opportunity to strengthen national health information systems, including improving data quality.

➢ In 1996, WHO issued a "Catalogue of health indicators: A selection of important health indicators recommended by WHO Programmes" (WHO/HST/SCI/96.8), that contained selected health indicators, their definitions, methods of measurement, sources used, periodicity and references. WHO has updated the health and health related MDG indicators. Kindly see updated definitions in Annex 3. Latest information will also be available in the updated UNDG Handbook on "Indicators for monitoring the millennium development Goals".

4.2   Group Work

The participants in their group discussions reviewed the reporting process at country, regional and global levels, and identified the role of ministries of health, national MDG information focal points, the UN Country Teams and the major role to be played by WHO. The outcome of the group discussions is as follows:

MDG Reporting Process

> It has endorsed an increasingly important role that the ministries of health could play not only in implementing the interventions for reaching MDG, but also taking responsibility for monitoring and evaluating the progress for reaching MDG. The ministries could include planning and monitoring MDG as part of national health development.

> The Ministries of Health should designate an appropriate focal unit/department for coordinating the MDG health related data, their data sources, validation and reporting processes.

> Ministries of health, with the full involvement of other sectors responsible for UN coordination and national planning and statistical agencies responsible for production of national data on socioeconomic and health, should form national intersectoral working groups or task forces on MDG. The working group could work closely with the UN Country Team on MDG, in order to share information on progress of MDG. UNDG (MDG), UNDP, UNICEF and WHO could jointly provide this national working group/task force for successful completion of their work.

> National health information system (HIS) is the backbone of the national health systems and it is crucial to strengthen them in all countries. Every opportunity has to be used to bring in extra resources for strengthening national capability on disease surveillance, morbidity and mortality recording and reporting, data collection and analysis, data compilation and reporting.

> After reviewing the MDG health indicators, it is recognized that a few countries still missed some information and that there were ways what to do with some missing data. WHO should provide technical support in statistical analysis and data processing.

> There are a few indicators that require appropriate definitions that could be understood and easily recorded and reported. A few still have to be collected and reported with standardized methodologies. Some statistical techniques and methodologies have to be shared with countries where data may be missing due to deficient information systems.

➢ WHO needs to work through UNDG with all other UN agencies for data consistency, including definition, methods of measurement, and sources. The proposed handbook on "Indicators for monitoring the millennium development Goals" by the UNDG, would serve this purpose. WHO should expedite its own version of definitions, measurement and sources for all health related MDG indicators.

➢ Ministries of health with technical support from WHO, should organize national consultation processes, in order to have national consensus of MDG health related data, their definition, methods of collection, analysis and reporting, and issuance of final agreed figures for country specific MDG, targets and indicators.

➢ Ministries of health have to identify which agency/agencies should be regarded as national databank for MDG data, what would be the periodicity of reporting, and what would be included in their annual reporting.

➢ The role of national HIS focal point is crucial in upkeep of its capacity by strengthening the human resources, providing routine and *ad hoc* data. The HIS focal institutions have to work closely with those institutions responsible for various periodic and *ad hoc* socioeconomic, health and health-related surveys, by providing technical support and also by working together and incorporating MDG indicators as part of routine or *ad hoc* surveys. They need to assess periodically the information gaps and amend them in the next cycles of surveys or routine reporting.

➢ UN Country Team should work closely with national statistical agencies and national HIS focal institutions for preparing UN MDG reporting. They should also advocate with politicians and decision-makers on the need for use of MDG indicators for assessing the work of national development. UN Country team could also facilitate in mobilizing resources for strengthening routine information systems and also for conducting periodic surveys.

➢ It was also noted that at global level, UN Secretary-General would use in his annual reporting the data from each responsible UN Agency (for health, it would be mainly from WHO). The UN Country Team would assist the national responsible agency for production of MDG Country Reports. WHO will provide MDG data of all Member Countries in its annual World Health Report as annex tables. WHO

will ensure the data consistency, accountability and validity after consultation and co-sharing with Member States. The ministries of health would also need to ensure data consistency, accountability and validity. It would be most appropriate that the data for MDG reporting from any reports either country, regional or global levels should come from the same sources. Different data sources took time to reconcile good with bad.

4.3   Recommendations

The meeting arrived at the following recommendations:

For Ministries of Health

(1) Continued political commitment should be provided to planning and monitoring MDG, and adequate financial, logistics, technical and human resources, in coordination with other sectors, development partners, stake holders, UN Agencies and NGOs.

(2) National consultative meetings should be conducted to review and follow-up the MDG health indicators. National focal ˙points responsible for reporting MDG should be designated. Ideally, the national HIS focal points should act as coordinators and facilitate capacity building in data collection, analysis, dissemination, periodic surveys and reporting related to MDG indicators.

(3) An intersectoral working group or taskforce, should be established for coordination with other agencies and UN Country Team, in sensitization of political leaders and provision of financial, technical human resource development support and advocacy for MDG activities.

(4) The national MDG reporting agency should ensure that the MDG reporting periodicity should be comparable with all other national information reporting periodicity.

(5) Periodical surveys on health and health-related MDG indicators should be carried out to complement national routine data collection, with the support of national governments and development partners.

For WHO

(1) Guidelines on standards for recording and reporting on the MDG health indicators should be finalized as soon as possible which could be used as a tool for monitoring and evaluation. UNDG's handbook on MDG indicators should be shared with Member Countries when it becomes available.

(2) National workshops, seminars and orientation courses should be organized in collaboration with the ministries of health and national statistical institutions, to advocate and disseminate information related to MDG health indicators such as basic rationale, definitions, methods of collection, compilation, analysis and estimation, results of trend analysis and limitation of data reporting, etc.

(3) Collaborative activities in strengthening national health information systems (HIS), especially in its capacity for collection, analysis and reporting should be enhanced. Resource mobilization for enhancing HIS activities should be facilitated.

(4) WHO should work closely with the national MDG focal institutions in order to reconcile data contained in national MDG-health reports with those published by it. WHO as a member of UN Country Team at each country, should ensure appropriate interaction with other UN agencies and development partners, and also with national statistical agencies for planning, implementation and monitoring of UN MDG, especially for health and health related MDG indicators.

(5) WHO should work closely with its partners especially those responsible for generating and use of MDG indicators in getting consensus of on the definitions and their measurement tools and methods. WHO should also worked with other agencies and national authorities who are responsible for conducting health and health related surveys by trying to incorporate the modules contained in World Health Survey (WHS) and trying to avoid any duplication and conflict and also to reduce cost.

5.   CLOSING

Dr A. Mechbal thanked all the participants for attending at short notice and their valid presence and participation. He assumed that documents circulated

at the meeting would be valid sources of information for their countries on their return. He also assured that WHO would provide detailed templates for each Member State, containing the latest estimated data for all WHO Core Health Indicators and urged the countries to expedite their responses in order to finalize the annual production of World Health Report.

Dr Tofayel Ahmed, on behalf of all participants, elaborated that the meeting was a definite eye-opener and assured that the inputs received through the documents and presentations would be very helpful to disseminate at the country level.

Acting Regional Director, Dr Poonam Khetrapal Singh, in her closing remarks said that the three days of intense deliberations and discussions would have provided sufficient background necessary to follow up on tracking health-related UN MDG targets and indicators for reporting them from the country level. She was delighted to note that even at such short notice, eight out of the 11 countries of the South-East Asia Region were able to participate along with the WHO country office staff. She urged the country participants and the country office staff to initiate the country consultation processes on reporting MDG-health-related goals, targets and indicators, on their return. She thanked WHO/HQ staff for giving this opportunity to hold the regional consultation and also all the participants for their active interaction and contributions.

The Chairman in his conclusion stated that the participants had thoroughly learnt of the origin and development of MDG, their related targets and indicators, and on how Member Countries had to struggle in implementing and reporting health and health related programmes to achieve the stated goals. The participants reviewed the monitoring process of the progress on MDG. They also gained a lot on understanding of definitions, methods of data collection and analysis and strengths and weaknesses of routine and ad-hoc surveys. He assured the commitment of all Member States and thanked WHO for organizing this meeting and requested to further provide support for monitoring MDG progress. He then closed the meeting.

Annex 1

PROGRAMME OF WORK

Day 1: Tuesday, 17 June 2003	
0830-0900 hrs	Registration
0900-0930 hrs	Inaugural Session
1000-1230 hrs	**I.** WHO and UN MDG Core Health Data Sets {Presentation by WHO/HQ} Background; Health as central theme in UN MDG: Clarifications and discussions **II.** Regional Overview {Presentation by WHO-SEARO & Countries} Regional overview of UN MDG: Progress and achievements (SEARO) Countries' Progress and achievements (Selected countries - Bhutan, Indonesia, Myanmar, Nepal) Clarification and discussions
1330-1545 hrs	**III.** UN MDG and WHO Core Health Indicators {Presentation by WHO/HQ} UN MDG & WHO Core Health Indicators: scope and limitations; Collaboration for MDG reporting: within WHO & with other agencies; Data flow at country level, responsibilities of countries, WHOCO (UN Country Team) and RO; Discussions
1600-1700 hrs	**IV.** Reporting on data sets (WHO Core Health and MDG Indicators) {HQ} Policy: Technical accountability and data collection strategies; WHO Data publishing, data production chain and information flow; Work schedule for collection and reporting of MDG in WHR (present & future); Discussions
Day 2: Wednesday, 18 June 2003	
0900-1015 hrs	**V.** WHO Core Health and UN MDG Indicators - Data sets {WHO/HQ} {Data tables : Definitions, Sources [routine reporting, HH & Population Surveys (national/ad-hoc) and others]; Challenges in data collection methodologies; Capacity; data tables: IMR, U5MR, life tables, HALE, Maternal Mortality Ratio; Discussions

1045-1230 hrs	**V.** WHO Core Health and UN MDG Indicators - Data sets {WHO/HQ} (contd.) Data tables: Skilled birth attendance; %Underweight; HIV/AIDS; TB; Discussions
1400-1530 hrs	**V.** WHO Core Health and UN MDG Indicators - Data sets {WHO/HQ} (contd.) Data tables: Malaria; water and sanitation; Essential drugs; Discussions
1600-1700 hrs	**V.** WHO Core Health and UN MDG Indicators - Data sets {WHO/HQ} (contd.) Data tables: NHA; other core health indicators; Indicators and tables that WHO will use for WHR2003; Discussions
Day 3: Thursday, 19 June 2003	
0900-1100 hrs	**VI.** County MDG Reporting Process {Countries – Groups/Plenary} Groups (Participants divided into 3 Groups) Reporting process UN Country Team (Role of WHO CO) Role of Ministry of Health and National HIS Focal Points Plenary discussions
1100-1230 hrs	**VI.** County Consultation Process {WHO/HQ} (contd.) (i) Expected outcomes; (ii) Deadlines; (iii) Participation; iv) Role of WHO - CO, RO, HQ & national focal points
1330-1430 hrs	Closing session

Annex 2

LIST OF PARTICIPANTS

Bangladesh

Dr Nural Anowar
Director (UMIS)
Directorate General of Health Services
Mohakhali
Dhaka

Mr Nowsher Alam
Project Director
Bangladesh Bureau of Statistics
Statistics Division, Ministry of Planning
Dhaka

Dr Tofayel Ahmed
Deputy Director (UMIS)
Directorate-General of Health Services
Mohakhali
Dhaka

Bhutan

Mr Kunzang Dorji
National Consultant
Jajin Consultancy Services
P.O. Box – 318
Thimphu

Dr Rinchen Chophel
Joint Director
Health Care Division
Ministry of Health & Education
Thimphu

DPRK

Unable to Participate

India

Unable to Participate

Indonesia

Mr Bambang Hartono
Chief, Centre for Health and data
Information (Pusat Data) Ministry of Health
Jakarta

Mr Arizal Ahnaf
Director of Welfare Statistics
Jakarta

Maldives

Mr Ahmed Afaal
Asst. Director, Ministry of Health
Male

Ms Fathmath Riyaza
Assistant Statistical Officer
Ministry of Planning & National Dev.
Ministry of Health
Male

Mr Ahmed Salih
Director, International Health
Ministry of Health
Male

Myanmar

Dr Daw Tin Linn Myint
Deputy Director
Department of Health Planning
Ministry of Health
Yangon

Dr Daw Thet Thet Mu
Assistant Director
Department of Health Planning
Ministry of Health
Yangon

U Aung Myint Thein
Deputy Director General (Retd.)
Central Statistical Organization
Myanmar

Nepal

Dr B.D. Chataut
Ministry of Health
Kathmandu

Mr Muniswor Mool
Senior Public Health Administrator
Department of Health Services
Ministry of Health
Kathmandu

Sri Lanka

Dr Sunil Senanayake
Director, Health Information Management Dev.
& Planning Unit,
Deptt of Health Services
Ministry of Health
Colombo
E-Mail – dinfo@sltnet.lk

Mrs Susantha Ranadeera
Senior Statistician
Statistics Branch
Registrar General's Deptt.
Colombo

Thailand

Dr Preeda Taearak
Deputy Director
Bureau of Policy & Strategy
Ministry of Public Health
Nonthaburi

Ms Suwanee Khamman
Director of Human Potential Develpment
NESDB
Bangkok

Ms Phandhipaya Dharmasaroja
Senior Policy and Analyst
Bureau of Inspection and Evaluation
Ministry of Public Health
Nonthaburi

Timor-Leste

Unable to Participate

WHO Country Offices

Dr George John Komba-Kono
MO(PHC), WRO, Dhaka
Bangladesh
E-Mail – kombakonog@whoban.org

Mr Peter Pachner
TO, WRO, Jakarta
Indonesia
E-Mail – pachnerpwho.or.id

Dr U Ohn Kyaw
STP-MO (PHA), WRO, Male
Maldives
E –Mail - ohnkyaw@who.org.mv

Dr Stephen Paul Jost
TO (PHA), WRO, Yangon
Myanmar
E-Mail- josts.whomm@undp.org

Dr U Lin Aung
MO (Plg), WRO, Kathmandu
Nepal
E-Mail – linaung@who.org.np

Dr Lokky Wai
TO (Plg), WRO, Colombo
Sri Lanka
E-Mail-lokky@whosrilanka.org

Mr Richard B. Kalina
Management Officer, WRO
Bangkok
Thailand
E-Mail-kalina@whothai.org

WHO HQ

Dr Abdelhay Mechbal
Director, HFS
EIP/HQ
E-Mail – mechbala@who.int

Dr Dominique Simone Egger
Coordinator, HFS/SPM
WHO/HQ
E-Mail – eggerd@who.int

Dr Michel J.J. Thieren
Scientist, HFS/SPM, WHO/HQ
E-Mail – thierenm@who.int

WHO SEARO

Dr U Than Sein
Director
Department of Evidence
and Information for Policy
WHO/SEARO, New Delhi
E-Mail - thansein@whosea.org

Dr A. Sattar Yoosuf
Director
Deptt of Sustainable Development and
Healthy Environments
WHO/SEARO
New Delhi
E-Mail - yoosufa@whosea.org

Dr N. Kumara Rai
Director
Deptt of Communicable Diseases
WHO/SEARO
New Delhi
E-Mail – raink@whosea.org

Dr Monir Islam
Director
Deptt of Family & Community Health
WHO/SEARO
New Delhi
E-Mail – islamm@whosea.org

Dr Myint Htwe
Coordinator (RD's Office and Liaison with
WHO country offices)
WHO/SEARO
New Delhi

Dr P.T. Jayawickramarajah
Coordinator, Strengthening Health Systems
Delivery
WHO/SEARO, New Delhi
E-Mail - Jayawickramarajahp @whosea.org

Dr Jai P. Narain
Coordinator – HIV/AIDS & TB
WHO/SEARO
New Delhi
E-Mail - narainj@whosea.org

Dr A.S. Abdullah
Coordinator, Communicable Disease
Control, WHO/SEARO
New Delhi
E-Mail – abdullaha@whosea.org

Dr Sawat Ramaboot
Coordinator, Health Promotion
WHO/SEARO
New Delhi
E-Mail – ramaboota@whosea.org

Mr Terrence Thompson
RA-WSH, Chemical Safety
WHO/SEARO
New Delhi
E-Mail - hildebranda@whosea.org

Dr J.M. Luna
RA-CAH
WHO/SEARO
New Delhi
E-Mail - lunaj@whosea.org

Dr Neena Raina
Technical Officer
Child & Adolescent Health
WHO/SEARO
New Delhi
E-Mail - rainan@whosea.org

Dr Rukhsana Haider
Regional Advisor
Nutrition for Health & Development
WHO/SEARO
New Delhi
E-Mail - haiderr@whosea.org

Dr K. Weerasuriya
Regional Advisor
Essential Drugs & Medicines Policy
WHO/SEARO
New Delhi
E-Mail - weerasuriyak@whosea.org

Dr Ying-Ru Lo
Medical Officer, AIDS
WHO/SEARO
New Delhi
E-Mail - loy@whosea.org

Mr Pak Chang Rim
External Relations Officer, ECU
WHO/SEARO
New Delhi
E-Mail - pakrim@whosea.org

Dr Ardi Kaptiningsih
RA-RHR
WHO/SEARO
New Delhi
E-Mail – Kaptiningsih@whosea.org

Dr K.C. S. Dalpatadu
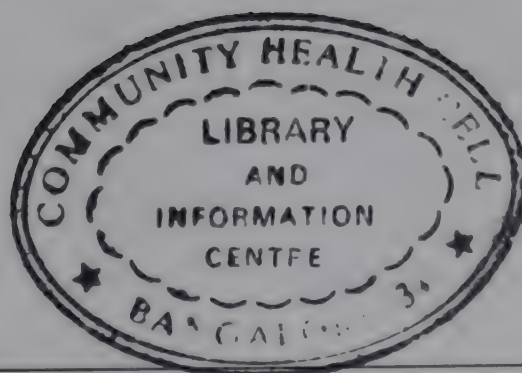Short Term Professional
Evidence for Health Policy
WHO/SEARO
New Delhi

Mr A.M. Meliala
STP-MAL
WHO/SEARO
New Delhi
E-Mail – melialaa@whosea.org

Dr Nani Nair
STP-TB
WHO/SEARO
New Delhi
E-Mail – nairn@whosea.org

Dr Nihal Singh
SA-EHP
Evidence for Health Policy
WHO/SEARO
New Delhi
E-Mail - singhn@whosea.org

Annex 3
MDG HEALTH INDICATORS AND MEANS OF MEASUREMENT

	MDG Health Indicator		Measured by (definitions):
4	Prevalence of underweight children under five years	4	Percentage of underweight children among children under five years of age
5	*[Proportion of population below minimum level of dietary energy consumption] (**)*		
13	Under five mortality rate (probability of dying between birth and age five)	13	Under-five mortality rate (per 1000 live births) per year
14	Infant mortality rate	14	Infant (aged 0 to 1 year) mortality rate (per 1000 live births) per year
15	Percentage of one year-old children immunized for measles	15	Percentage of 1-year-old children immunized against measles per year
16	Maternal mortality ratio	16	Maternal mortality ratio (per 100 000 live births) per year
17	Percentage of births attended by skilled health personnel	17	Proportion of life births attended by skilled health personnel per year
18	HIV prevalence among pregnant women aged 15 to 24 years	18	HIV prevalence among pregnant women aged 15 to 24 years attending antenatal care clinics or among population groups at high risk (used as proxy for young people) (*) per year
19	Condom use rate or the contraceptive prevalence rate	19a	Percentage of young people aged 15-24 reporting the use of a condom during sexual intercourse with a non-regular partner(*) per year
		19b	Percentage of young people aged 15-24 who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission (*) per year
20	Number of children orphaned by HIV/AIDS	20	Ratio of current school attendance among orphans to that among non-orphans aged 10 to 14 years (*) per year
21	Prevalence and death rates associated with malaria	21	Number of notified malaria cases per 100 000 population per year
			Note for malaria mortality: Under-five mortality rate (per 1000 live births) per year (measure for MDG indicator No. 13), reported together with malaria intervention coverage (22a, 22b, other), used as proxy measure
22	Proportion of population in malaria risk areas using effective malaria prevention and treatment measures	22a	Percentage of population under five years of age in malaria-risk areas using insecticide-treated nets

---

* Health-related indicator reported by FAO only.

MDG Health Indicator			Measured by (definitions):
		22b	Percentage of population under five years of age in malaria-risk areas with fever being treated with effective antimalarial drugs
23	Prevalence and death rates associated with tuberculosis	23a	Number of smear-positive cases per 100 000 population per year
		23b	Number of tuberculosis (all forms) deaths per 100 000 population per year
24	Proportion of tuberculosis cases detected and cured under directly observed treatment short course	24a	Proportion of estimated new smear-positive TB cases detected under DOTS in a given year
		24b	Proportion of registered smear-positive TB cases successfully treated under DOTS in a given year
29	Percentage of population using biomass fuels	29	Percentage of population using solid fuels in a given year
30	Percentage of population with sustainable access to an improved water source (urban, rural)	30a,b,c	Percentage of population with sustainable access to an improved water source, in a given year, 30.a. urban; 30.b. rural; 30.c. total
31	Percentage of urban population with access to improved sanitation	31	Percentage of urban population with access to improved sanitation in a given year
46	Percentage of population with access to affordable essential drugs on a sustainable basis	46	Percentage of population with access to affordable essential drugs on a sustainable basis

Annex 4

MDG INDICATORS: DEFINITIONS[11]

Prevalence of Underweight Children (under-five years of age) (G1.T2.I4): Proportion of children of under-five years with low weight-for-age as measured by percentage of children in moderately or severely underweight – those falling below 80% of the median weight for reference value or below two standard deviations of national or international reference populations, such as growth charts of the US National Center for Health Statistics. (UNICEF)

Proportion (%) of population below minimum level of dietary energy consumption (G1.T2.I5): Since there is no specific data available, proxy indicator *"Proportion of population undernourished"* is used. It is the proportion of persons whose food intake falls below the minimum requirement or food intake that is insufficient to meet dietary energy requirements continuously. (FAO)

Under-five mortality rate (G4.T5.I13): Probability of dying between birth and exactly five years of age, expressed per 1000 live births (WHO).

Infant mortality rate (G4.T5.I14): Probability of dying between birth and exactly one year of age, expressed per 1000 live births. (WHO, ICD-10)

Proportion (%) of one year old children immunized for measles (G4.T5.I15): Proportion of children who received at least one dose of measles vaccine in a given year. (WHO)

Maternal mortality ratio (G5.T6.I16): Ratio of number of maternal deaths per 100000 live-births in a given year. A maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes. (WHO, ICD-10)

---

[11] WHO (2003), Millennium Development Goals: Compendium of health-related indicators (draft 20 October 2003)

Proportion (%) of births attended by skilled health personnel (G5.T6.I17): Percentage of births attended by skilled health personnel to total number of live-births in a given year. Skilled health personnel refer exclusively to those health personnel (for example, doctors, nurses, midwives) who have been trained to proficiency in the skills necessary to manage normal deliveries and diagnose or refer obstetric complications. Traditional birth attendants trained or untrained are **not** included in this category. (WHO)

HIV prevalence among pregnant women aged 15 to 24 years (attending antenatal care clinics per year) (G6.T7.I18): Percentage of HIV positives among those tested of pregnant women aged 15 to 24 years, attending antenatal care clinics per year. If the relevant data is not available, the proxy indicator as proposed by UNAIDS/WHO is *"**HIV prevalence among 15-24 years old by sex"*** which is the estimated number of young people (15-24 years old) living with HIV/AIDS, as per proportion of the same population and sex. These country-specific estimates are expressed as a range generated by regional modeling (UNAIDS). Another proxy indicator is *"**HIV prevalence rate among population 15-49 years of age"***, which is not an MDG indicator, but it is the most reported indicator universally and for which a valid and reliable method exists.

Condom use of young people aged 15-24 years, reporting use during sexual intercourse with a non-regular partner (G6.T7.I19a): Percentage of young people aged15-24 years, who reported the use of a condom during sexual intercourse with a non-regular (non-marital, non-cohabiting) partner of those who reported having had a non-regular partner in the last 12 months (WHO/UNICEF/UNAIDS).

Condom use of young people aged 15-24 years, who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission (G6.T7.I19b): Percentage of respondents (aged 15-24 years) who gave the correct answers to all five questions related to "sound knowledge on HIV transmission", to those who responded to all questions. (WHO/UNICEF/UNAIDS)

Ratio of children orphaned/non-orphaned by HIV/AIDS (G6.T7.I20): Ratio of current school attendance among orphaned children to that among non-orphans (aged 10-14 years for boys and girls) in a given per year. *If the relevant data is not available, proxy indicator is used as "**AIDS orphans currently living**"*

which is the estimated number of children (0-14) having lost their mother or both parents to AIDS in a given year. (UNAIDS/WHO)

Malaria prevalence rate per 100,000 population (G6.T8.I21a): Proportion of notified (clinically identified) cases of malaria per 100000 population in a given year. (WHO)

Malaria death rate per 100000 in children (0-4 years of age) (G6.T8.I21b): Proportion of children (0-4 years of age) who died due to malaria (clinically identified) in a given year (WHO). Since malaria specific mortality cannot be monitored routinely, the overall under-five mortality rate (U5MR) will be used as a proxy indicator, with an added information on how much that mortality is attributed due to malaria.

Proportion (%) of population under age five in malaria risk areas using insecticide treated bed nets (G6.T8.I22a): The percentage of children under five years of age using insecticide-treated bed nets among the same population living in malaria-risk areas in a given year. (UNICEF/WHO)

Proportion (%) of population under age five with fever being treated with anti-malarial drugs (G6.T8.I22b): The percentage of children under five years of age, with fever being treated with effective anti-malarial drugs, among the same population living in malaria-risk areas in a given year. (UNICEF/WHO)

Tuberculosis prevalence rate per 100000 (G6.T8.I23a): Proportion of tuberculosis (TB) cases (smear positives estimated) of all age-groups per 100000 population in a given year (WHO)

Tuberculosis death rate per 100000 (G6.T8.I23b): Proportion of people who died due to tuberculosis (all cases) per 100000 population (all ages) in a given year. (WHO)

Proportion (%) of estimated new smear-positive TB cases detected under directly observed treatment short-course (DOTS) in a given year (G6.T8.I24a): It is referred as "DOTS detection rate" (WHO).

Proportion (%) of registered smear-positive TB cases successfully treated under directly observed treatment short-course (DOTS), in a given year (G6.T8.I24b): It is referred as "DOTS treatment success rate" (WHO).

Proportion (%) of population using solid fuels (G7.T9.I29): Percentage of population using solid fuels in households as their primary source of domestic energy for cooking and heating, in a given year. Solid fuels include biomass fuels such as wood, agricultural residues, animal dung, charcoal, and coal wood, plus coal. (WHO/UNICEF)

Proportion (%) of urban population with sustainable access to an improved water source (G7.T10.I30a): "Improved" water source means household connection, public standpipe, borehole, protected dug well, protected spring, rainwater collection. "Access" means the availability of at least 20 litres per person per day from a source within one kilometre of the user's dwelling. "Sustainable access" has two components : one stands for environmental sustainability in terms of environmental protection of ground water. Another stands for programme sustainability in terms of supply and management. The proxy indicator is *"Percentage of population with access to improved/ safe drinking water sources"* (WHO/UNICEF)

Proportion (%) of rural population with sustainable access to an improved water source, rural (G7.T10.I30b): "Improved" water source means household connection, public standpipe, borehole, protected dug well, protected spring, rainwater collection. "Access" means the availability of at least 20 litres per person per day from a source within one kilometre of the user's dwelling. "Sustainable access" has two components : one stands for environmental sustainability in terms of environmental protection of ground water. Another stands for programme sustainability in terms of supply and management. The proxy indicator is *"Percentage of population with access to improved /safe drinking water sources"* (WHO/UNICEF)

Proportion (%) of total population with sustainable access to an improved water source (G7.T10.I30c): Proportion of total population with sustained access to an improved water source (WHO/UNICEF)

Proportion (%) of urban population with sustainable access to improved sanitation (G7.T11.I31): "Improved" sanitation means: connection to a public sewer, connection to septic system, pour-flush latrine, simple pit latrine, or ventilated improved pit latrine. "Sustainable access" has two components: one stands for environmental sustainability in terms of draining black waters below what is actually environmentally safe. Another stands for programme sustainability in terms of supply and management. The excreta disposal system

is considered adequate if it is private or shared (but not public) and if it hygienically separates human excreta from human contact. (WHO)

Proportion (%) of population with access to affordable essential drugs on a sustainable basis (G8.T17.I46): Percentage of population having access to a minimum of 20 most essential drugs (not necessarily the same drug for each country) for a given year. "Access" means that drugs are continuously available and affordable at public or private health facilities or drug outlets that are within one hour's walk. Essential drugs are those drugs that satisfy the health care needs of the majority of the population. The proxy indicator is **"*percentage of population with access to essential drugs*"**, which WHO routinely reports for international comparison. Every year, in order to estimate the level of access to essential drugs, WHO Global Action Programme on Essential Drugs interviews relevant experts in each country about the pharmaceutical situation. The interviewees could choose from four levels of access by the population to essential drugs: less than 50%; between 50-80%; 80-95%; and above 95%. They indicate which category is most appropriate for their country. (WHO)